

## MISCELLANEOUS NOTES

1. OCCURRENCE OF THE TIBETAN SAND FOX *VULPES FERRILATA* HODGSON IN LADAKH:  
A NEW RECORD FOR THE INDIAN SUBCONTINENT

Owing to its location at the tri-junction of Central Asia, Southeast Asia and Africa, India harbours a diverse assemblage of flora and fauna (Mani 1974), and it is on the list of twelve 'megadiversity' nations in the world. Covering about 2% of the world's land surface, India houses about 9% of all the mammalian species and more are being added to this rich biological repertoire with some even new to science (Datta *et al.* 2003; Mishra *et al.* 2005; Kumar *et al.* 2005; Sinha *et al.* 2005; Mishra *et al.* in press). Presently the country is thought to harbour 419 species of mammals of which 61 are carnivores including 7 canids (Johnsingh and Manjrekar, in press).

In this note, we describe the occurrence of the Tibetan Sand Fox *Vulpes ferrilata* in Ladakh, Jammu and Kashmir, India. The species is widely distributed on the Tibetan Plateau, but hitherto it has not been reported from India. However, given the location of Ladakh at the western edge of the Tibetan Plateau, some authors have speculated that the species could occur in this region (Postanovicz 1997, Schaller and Ginsberg 2004). Schaller and Ginsberg (2004) note that no reliable evidence exists of its occurrence outside certain Chinese reserves such as the Arjin Shan, Xianza, Chang Tang and Hoh Xil. Early works on Ladakh's mammalian species, (Ganhar 1979) as well as more recent inventories (Pfister 2004) have not enlisted this species. Johnsingh and Manjrekar (in press) also have not mentioned about the occurrence of the species within the Indian Territory, and have described it as one of the lesser-known mammals of South Asia. All these indicate that the species has not been documented from India and our finding adds one more species to the list of carnivores of Ladakh as well as the Indian subcontinent.

The Tibetan Sand Fox is a small carnivore (3.0-4.5 kg) of the Family Canidae. The dorsal part and the flanks are sandy to pale rufous, and the neck, thighs and rump are greyish. The underparts are also whitish to light grey, and the tail is bushy with a white tip (Schaller and Ginsberg 2004). The Tibetan Sand Fox is morphologically distinct from the Red Fox *V. vulpes*, whose distribution overlaps with that of the former over large tracts of the Tibetan Plateau. The Red Fox is larger (4.6-5.3 kg), and conspicuously rufous with dark grey to black legs and tail. The two species also somewhat differ in their habitat use, as the Tibetan Sand Fox inhabits alpine meadows with rolling terrain within an altitudinal range of 2,500-5,200 m, whereas the Red Fox occupies relatively rugged terrain, and is often found in wooded areas as well (Schaller 1998, Schaller and Ginsberg, 2004). The Tibetan Sand

Fox is morphologically more similar to the Corsac *V. corsac*, but the two have non-overlapping distributions (Schaller and Ginsberg 2004).

The geographical range of the Tibetan Sand Fox extends over the Tibetan Plateau encompassing Xinjiang, Gansu, Qinghai and Sichuan provinces (China) and Mustang (Nepal). In a survey of 43 counties of Tibet Autonomous Region (TAR), c. 37,000 Tibetan Sand Foxes were estimated by Piao (1989). The Red Fox on the other hand has a very wide distribution encompassing the entire northern hemisphere except Iceland and some arctic islands (Macdonald and Reynolds 2004). The Corsac is also widely distributed in central Asian countries of Turkmenistan, Uzbekistan, Tajikistan and Kazakhstan, extending eastward into Russia and westwards into parts of Europe.

We surveyed the Parma Valley and the Pangong Tso Basin in August 2000, Hanle and the Chumur valleys of eastern Ladakh during July-August 2004, and Hanle and Kuyul valleys in March-April 2005. The latter two surveys were carried out in conjunction with an ecological study on the Tibetan Gazelle *Procapra picticaudata*. The surveyed areas are part of the vast plains of the Tibetan Plateau that extend westwards into the Ladakh region of the Indian Trans-Himalaya. Topography is characterised by open and rolling terrain interspersed with rocky terrain, and altitude ranges from 4,000-5,500 m. Owing to the rain-shadow effect of the Greater Himalaya, precipitation is minimal (100-400 mm annually), occurring mostly as snow. Temperatures range between -35°C in winters and +20°C in summers. The large mammals of the area include the Tibetan Gazelle, Tibetan Wild Ass or Kiang *Equus kiang*, Tibetan Argali *Ovis ammon hodgsoni*, Blue Sheep or Bharal *Pseudois nayaur*, and their predators such as the Snow Leopard *Uncia uncia*, Tibetan Wolf *Canis lupus*, Eurasian Lynx *Lynx lynx* and the Red Fox *Vulpes vulpes*. Small mammals include Pikas *Ochotona* spp. and Voles *Alticola* spp., which are important prey for the Tibetan Sand Fox (Mitchell 1977, Schaller 1998). People are predominantly nomadic pastoralists, although some cultivate on a limited scale.

During various surveys, the plains and the rolling mountain slopes were scanned with binoculars and spotting scopes to record wildlife. Apart from field surveys, we also enquired the local people about the occurrence of fox in their area. On an affirmative response, they were shown the pictures of the Red Fox (picture of the Tibetan Sand Fox was not available) and asked whether the animal they had seen

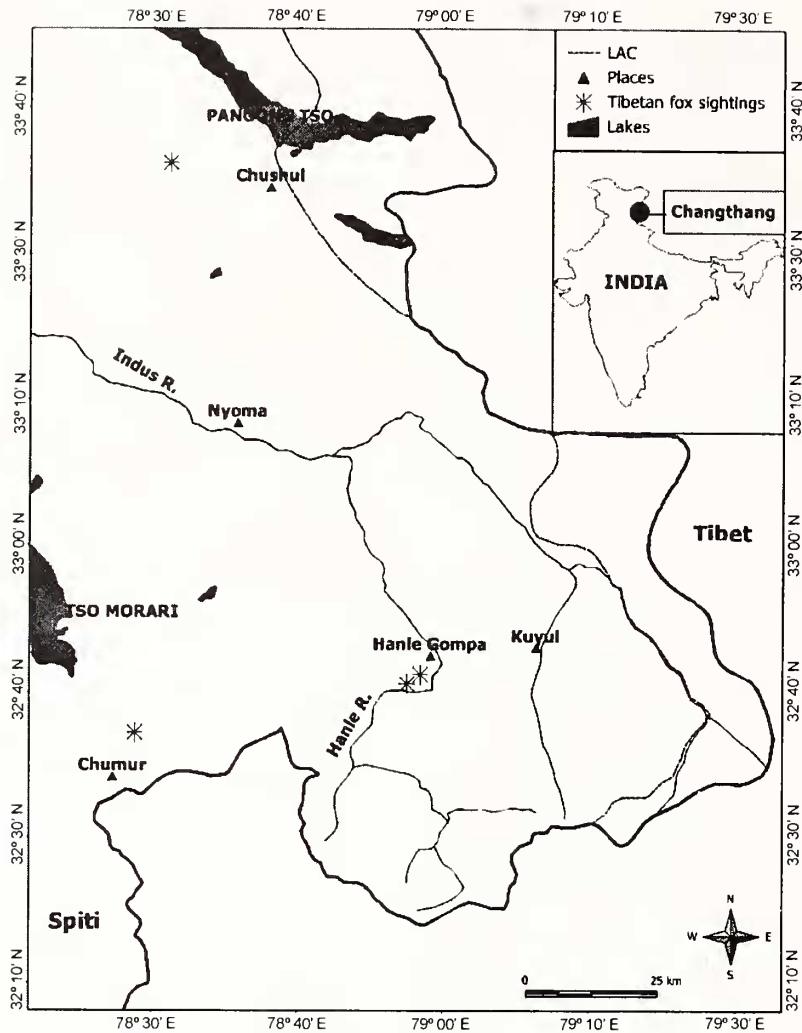


Fig. 1: Locations of the Tibetan Sand Fox sightings in Changthang, Ladakh, India

could differ from the Red Fox. The villagers were also asked if they possessed the fur of any of the two foxes as it is traditionally used for making hats, and lining traditional Ladakhi dresses.

The Tibetan Sand Fox was sighted on four occasions during these surveys. The first observation was made on the Kajukongka La (pass) between the Parma Valley and Chushul (Bhatnagar and Wangchuk 2001, Fig. 1). During a 10 minute observation through binoculars, we noted that the animal was distinctly pale rufous coloured, and had a large bushy tail with a white tip. The second sighting was in the Chumur Valley on July 15, 2004. While driving in the evening, we saw a fox scurrying across a slope above the road. On a closer look through binoculars, it turned out to be the Tibetan Sand Fox. It was smaller than the Red Fox and the colour was greyish yellow with paler underparts. It stood and stared at our vehicle for about three minutes and then climbed up the slope. Interviews with the herders revealed that a fox, paler and smaller than the Red Fox, does occur in the region. Further,

they revealed that this fox is known to them by the local name *Sili*, whereas the Red Fox is called *Aatse*.

We continued our survey in Hanle in 2005, and sighted the Tibetan Sand Fox on two more occasions. On April 3, 2005 at 0930 hrs, we came across a fox on the southern slope of the Sdikpa Raza Hill near Hanle Gampa (Monastery; Fig. 1). It was moving across a gravel-strewn slope above the link road to the Pungug Village, sniffing and squatting intermittently on low shrubs of *Artemisia* and *Eurotia* spp. Villagers had also reportedly seen *Sili* on the same hill. Next morning we visited the same site, and saw two individuals. One fox emerged from behind a large boulder and rushed towards a smaller boulder where another fox was lying down. After nuzzling the resting fox, it moved up the slope. We visited the site again in the evening to check for any dens, but in vain. We, however, found the resting sites and scats entangled in low shrubs. In one of the scats, there were many *Ephedra* seeds.

However, we did not observe any Tibetan Sand Fox in the Kuyul Valley. Interviews with the local pastoralists, known as *Changpas*, revealed that the species was common in the valley some 20 years ago, but has since declined. The *Changpas* claimed that the species is not persecuted currently due to the implementation of conservation laws. We, however, came across many hats made of Red Fox skin acquired in the past, but none from the skin of the Tibetan Sand Fox. We were told by the locals that when hunting was widespread, Tibetan Sand Fox was persecuted less compared to the Red Fox, as its fur was considered inferior.

The natural history of the large mammals of the Ladakh Region was documented by explorer/travellers of the early 20<sup>th</sup> century (Burrard 1925; Stockley 1936). More recently, the large herbivores and carnivores of the region have been well documented by naturalists and field biologists (Ganhar 1979; Mallon 1991; Fox *et al.* 1991; Pfister 2004). Nevertheless, the occurrence of the Tibetan Sand Fox remained undocumented, perhaps because large tracts of the remote eastern Ladakh (potential habitat for the species) were out of bounds for many surveyors. It is also possible that those who visited the area and saw the animal mistook it for the Red Fox, which is widely distributed in Ladakh (Mallon 1991).

Our finding indicates that the fauna of Ladakh, especially smaller animals of the lesser-known genera remain largely unknown. In any case, although our surveys have established the occurrence of the Tibetan Sand Fox in Ladakh, its status and distribution in the region remain to be documented. According to the *Changpa* pastoralists, *Silis* were relatively common in Changthang in the past, but the encounter rate has declined in recent years. Moreover, unlike in the case of Red Fox, which is well studied (Macdonald and Reynolds 2004), there is no information available on the reproductive and social behaviour of the Tibetan Sand Fox throughout its range (Schaller and Ginsberg 2004). Therefore, there is an urgent need to gather baseline information on its status, distribution and ecological aspects, which are crucial for developing appropriate conservation strategies. We have

plans for further surveys in the coming years in Ladakh to assess the distribution and threats to the species.

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## 2. DOMESTIC DOG (*CANIS FAMILIARIS*): THREAT FOR THE GOLDEN LANGUR *TRACHYPITHECUS GEEI*

Primates are sensitive to the risk of predation (Dunbar 1988), and both actual predation and the risk of predation influence the behavioural strategies of the species. Primates often fall prey to predators, especially carnivorous mammals and birds.

The Dog (*Canis familiaris*) is one of the earliest domesticated animals. It is the most common domestic animal in the villages adjoining the forests in Assam. This poses a threat to the wildlife.

The Golden Langur (*Trachypithecus geei*) is a restricted range species, its distribution in India being confined to a forest belt between river Manas in the east, Sankosh in the west and, Brahmaputra in the south in the Indo-Bhutan Border. Many populations of Golden Langur now live in forests adjoining human settlements. They are compelled to move on the ground due to the canopy gaps, where they are vulnerable to attack by dogs.

A socio-ecological study of the Golden Langur was carried out in Chakrashila Wildlife Sanctuary in Dhubri district of Assam during 2001-2002. In this study, several aggressive encounters between the domestic dog and the Golden Langur were observed. The death of an adult male and an adult female of the same troop, due to predation by domestic dog, occurred in Jomagara, a village on the fringe of the Chakrashila Wildlife Sanctuary, on January 6 and on February 12, 2002. The villagers reported a few killings of Golden Langur by domestic dogs in the same area. Observations of aggressive encounters between a semi-provisioned group of Golden Langurs and domestic dogs in Umananda River Island in Guwahati during a long-term study also support this view (Medhi 2002).

The villagers use dogs to chase away the monkeys to prevent crop raiding. A survey in the fringe villages of Chakrashila Wildlife Sanctuary revealed that every year 3-4 Rhesus Macaques (*Macaca mulatta*) also fall prey to dogs.

These incidences show the emergence of both domestic and stray dogs as a threat to primates in general, and the Golden Langur in particular.

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